CLAIMS

1. A method of reducing the effects of varying environmental conditions, such as varying temperature, on the measuring results in a measuring instrument , wherein the measuring instrument comprises a measuring unit (20) with components which are sensitive to varying environmental conditions,

   characterized in that

   a) the measuring unit (20) is thermally insulated such that the effects of variations in the environmental conditions on sensitive components are substantially reduced, but dissipated heat generated within the measuring unit can still leave the measuring unit ; and

   b) the temperature in the measuring unit (20) is controlled by means of a control loop comprising a temperature sensor (37) and means to influence the temperature in the measuring unit in such a way that the temperatures at locations with sensitive components are kept substantially constant.

2. Method as in claim 1, wherein the step of thermal insulation (step a)) comprises arranging a thermal barrier (41) between the measuring unit (20) and the housing (40) of the measuring instrument.

3. Method as in claim 1 or 2, wherein the target temperature in the measuring unit (20) is related to the ambient temperature and wherein the range to be controlled is in the order of the expected variation of the ambient temperature.

4. Method as in claim 3, wherein the target temperature in the measuring unit (20) is above the ambient temperature, for example by about one half of the expected variation of the ambient temperature.

5. Method as in any of the preceding claims, wherein the controlling of the temperature in the measuring unit (step b)) comprises:
   - providing a fan (34) for directing air to the measuring unit (20) and a heater (36) for heating the air directed to the measuring unit (20) by the fan;
   - measuring the temperature of the heated air and using this temperature as input signal to the control loop.

6. Method as in claim 5, comprising the additional steps of measuring the temperature (ϑ_{amb}) close to the housing of the measuring instrument where ambient air enters the instrument and deriving from this temperature an additional input signal (46) to the control loop.

7. Method as in any of the preceding claims, wherein the measuring instrument is a liquid chromatography detector, in particular a liquid chromatography absorbance detector .

8. A measuring instrument, for example an optical detector, comprising a measuring unit (20) with components which are sensitive to varying environmental conditions, such as varying temperature,
   characterized in that for reducing the effects of varying environmental conditions,
   a) a thermal insulation means (41) is provided in the measuring instrument which substantially reduces the effects of variations in the environmental conditions on sensitive components, but still permits dissipated heat generated within the measuring unit to leave the measuring unit ; and
   b) control means are provided for controlling the temperature in the measuring unit (20), wherein the control means comprise a temperature sensor (37) and means to influence the temperature in the measuring unit in such a way that the temperatures at locations with sensitive components are kept substantially constant.

9. Measuring instrument as in claim 8, wherein the thermal insulation means is a thermal barrier (41) arranged between the measuring unit (20) and the housing (40) of the measuring instrument.

10. Measuring instrument as in claim 8 or 9, wherein the control means comprise:
- a fan (34) for directing air to the measuring unit (20),
- a heater (36) for heating the air directed to the measuring unit (20) by the fan,
- a temperature sensor (37) for measuring the temperature of the heated air, and
- a control loop connected to the temperature sensor (37) and to the heater (36).

11. Measuring instrument as in claim 10, wherein an additional temperature sensor (38) is provided close to the housing (40) of the measuring instrument where ambient air enters the instrument, and wherein the temperature measured with the additional temperature sensor (37) is an additional input signal to said control loop.

12. Measuring instrument as in any of the claims 8 to 11, wherein the measuring unit comprises a flow cell (21) through which solvent can flow, for example solvent from a liquid chromatograph, characterized in that additional means are provided for adapting the solvent inlet temperature to the temperature of the flow cell environment.